

CLAIMS

1. A fluid-product dispensing device that includes a reservoir (10) containing a fluid product and a propellant, a
5 non-metering dispensing valve (20) being mounted on the said reservoir (10), the said valve (20) including a valve stem which is movable between a closed position and an open position, the said valve (20) being designed to dispense fluid product for as long as the valve stem is kept in the open
10 position, the device also including a dispensing head (30) mounted on the said valve stem (20) and including a dispensing orifice (31), the said head (30) including a metering system (32, 33, 34, 35) designed to dispense a precise and repeatable metered quantity of fluid product with each operation of the
15 device, characterised in that the said metering system (32, 33, 34, 35) includes an operating element (34), a control element (32) and a metering element (33), the said operating element being capable of moving the said control element and the said metering element, the said control element (32)
20 moving the said actuator (20) between its closed and open positions, and the said metering element (33) being movable within the control element (32) between a shut-off position and a dispensing position.

25 2. A device according to claim 1, in which the said operating element (34) is attached to the said control element (32) by means of an elastic element (35), such as a spring, whose stiffness is greater than the force necessary to move the valve stem(20), so that at the start of the operation, the
30 operating element (34), the control element (32) and the metering element (33) move together as a static unit.

3. A device according to claim 2, in which, when the control element (32) is in abutment, with the valve stem (20) in the open position, product is fed into the said dispensing head (30), with the metering element (33) in the shut-off position and preventing any dispensing of this product.

4. A device according to claim 2 or 3, in which, when the control element (32) is at in abutment, with the valve stem(20) in the open position, continuation of the operating element (34) in its operating trajectory gives rise to a deformation of the said elastic element (35) placed between the operating element (34) and the control element (32), and therefore a movement of the said operating element (34) and of the said metering element (33) in relation to the said control element (32).

5. A device according to claim 4 in which, when the metering element (33) moves in relation to the control element (32), it first arrives at a metering position in which it shuts off, in a sealed manner, a passage (40) to the said valve stem (20), thus determining the volume of the metered quantity, and then at a dispensing position in which the said metered quantity is dispensed through the said dispensing orifice (31).

6. A device according to any of the preceding claims, in which the control element (32) is hollow and forms, at least partially, a metering chamber (50) and a feed passage (40) between the said metering chamber (50) and the said valve stem (20), the said metering element (33) including a first gasket (36) forming, together with the said feed passage (40), an entry valve for the metering chamber (50), and a second

gasket (37) forming, together with the metering chamber (50), an exit valve from the metering chamber (50).

7. A device according to claim 6, in which, during
5 operation, the said entry valve closes before opening of the said exit valve, and after operation, the said exit valve closes again before opening of the said entry valve.

8. A device according to claim 6 or 7, in which
10 the said first gasket (36) is annular and fits onto the walls of the feed passage (40) in the closed position of the entry valve, the said passage (40) and/or the said metering chamber (50) including walls of larger diameter fitting onto the said first gasket (36) in the open position of the said entry
15 valve.

9. A device according to any of claims 6 to 8, in which the said second gasket (37) is annular and fits onto the walls of the said metering chamber (50) in the closed position of
20 the exit valve, the said metering chamber (50) including walls of larger diameter fitting onto the said second gasket (37) in the open position of the said exit valve.

10. A device according to any of the preceding claims,
25 in which the said operating element (34) is snapped onto the said control element (32).

11. A device according to any of the preceding claims, in which the control element (32) contains a metering chamber
30 (50), the said metering element (33) simultaneously forming the entry valve (36) and the exit valve (37) of the said metering chamber (50).